Onchidoris sparsa (Alder & Hancock, 1846) in Asturias, Northern Spain [1]

BY

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(1 Text figure)

During July and August, 1977, 8 specimens of the little nudibranch *Onchidoris sparsa* (Alder & Hancock, 1846) were collected along the Asturian coast of northern Spain. Although this species was described in 1846, only 5 specimens have been recorded previously (Thompson & Brown, 1976: 102), and they were all collected in the British Isles.

With the finding of these specimens from Spain, we have been able to describe additional morphological characters which augment the original description.

Onchidoris sparsa (Alder & Hancock, 1846)

Material: 1. Verdicio (43°35'N; 5°50'W); 2 specimens, under stones in intertidal pools, between a small colony of encrusting bryozoan and a formation of the tunicate *Botryllus schlosseri.*

2. Artedo (43°30'N; 6°10'W); 6 specimens, –0.5 m low tide, under stones with encrusting bryozoan (Cribilinidae and Microporidae) on which they feed.

Two of the specimens have been sent to the Paris Museum of Natural History, and the rest are preserved in the Zoology Department of Oviedo University.

Morphological Characters: The largest specimen collected measured 6 mm long. The maximum length known for the species is 8 mm (Hunnam & Brown, 1975: 148). The usual color is whitish or somewhat yellowish, with brown or brown-red sparse color patches in between the dorsal tubercles. On the back there is a generally orange-brown central zone which is caused by the visceral pigmentation (also visible ventrally in the center of the foot) showing through the skin.

The foot is not furrowed anteriorly. In some animals it slightly protrudes past the posterior mantle edge, especially when the animals move.

Generally the mantle tubercles are widely spaced, short, stout and of wide base, and seldom protrude from the sides of the animal. The tubercles usually have spicules in their bases, and some of them have the apex colored similarly to the mantle patches. In front of the rhinophores and oblique to the long axis of the body, there are 2 bigger tubercles, and in some cases there is a third posterior tubercle.

The rhinophores are completely retractile and in the larger specimens have up to 9 lamellae. The rhinophores are pale yellow and the lamellae are brownish.

The non-retractable gills can have up to 10 unipinnate branchiae distributed around the anus. Usually they are arranged in a horseshoe or quadrangular fashion, in which case 3 anterior tubercles form a line in the transverse axis of the body. In some specimens, the white horseshoe-shaped gills stand out prominently from the brown pigment of the anal region. Usually the anus is located between 2 tubercles, in a richly pigmented region. In some cases an anal papilla is also present.

The mantle spicules are arranged similarly to the pattern found in other species of *Onchidoris.* There is a peripheral band around the margin and an interior region (down the center of the dorsum) in which the spicules lie perpendicular to the long axis of the animal's body. Lengthwise between these 2 regions is a band of oblique (relative to the body's long axis) spicules.

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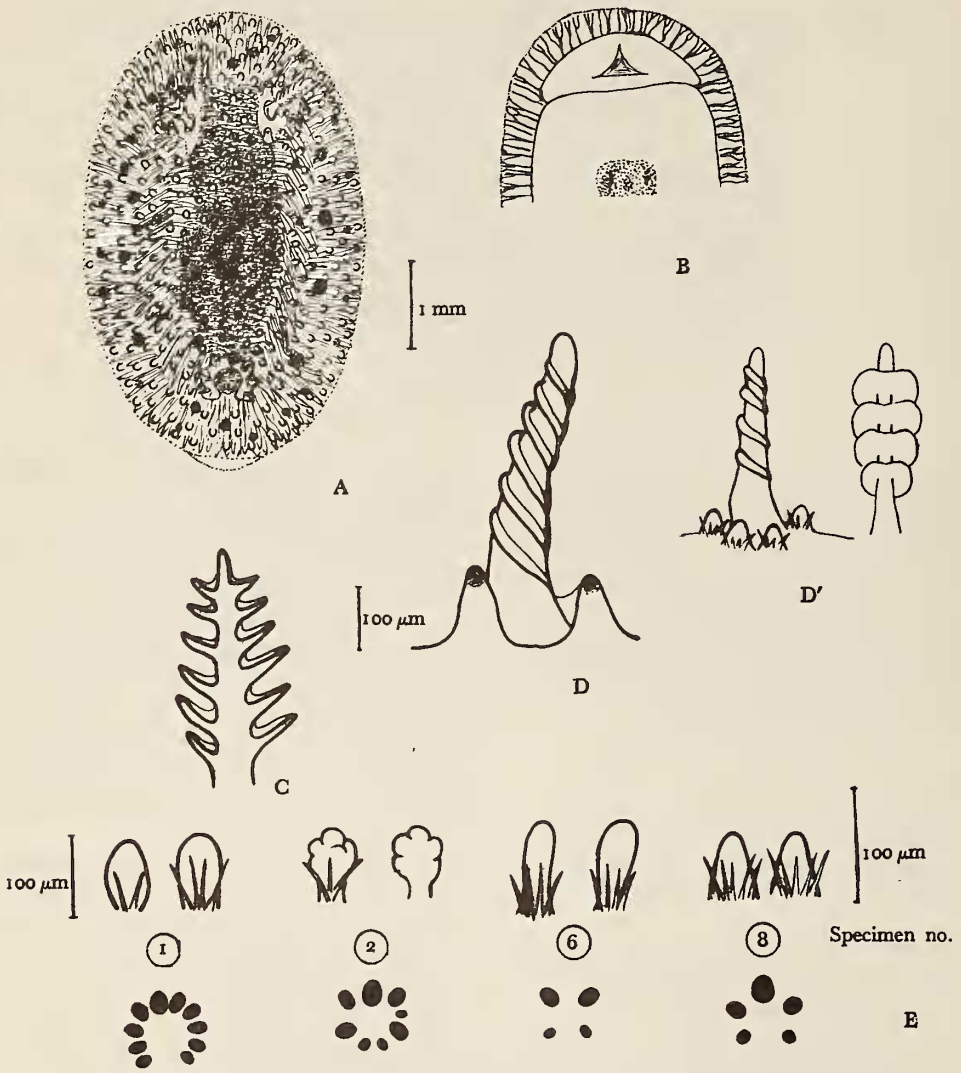

Figure 1

Onchidoris sparsa (Alder & Hancock, 1846)
external anatomy

A Dorsal view of living animal B Antero-ventral portion of *Onchidoris sparsa* C Branchial leaf D and D′ Rhinophores from the largest and smallest specimens collected E Variation among the shape of the mantle tubercles and the arrangement of the gills. Circled numbers refer to the specimen numbers in Table 1

Table 1

Morphological variation in specimens of *Onchidoris sparsa*

Specimen Number	1	2	3 and 4	5	6	7	8
Size (length and width in mm)	6 × 3.5	5 × 3	4 × 2.3	3.9 × 2.1	3.2 × 2	2.8 × 1.8	2 × 1
Locality	Verdicio	Artedo	Artedo	Artedo	Artedo	Artedo	Verdicio
Color	yellowish with brown patches	white and yellowish with red patches	white with brown patches	white with brown patches	white with brown patches	white with brown patches	very pale yellow
Foot protruding past posterior mantle edge	yes	no	no	no	yes	no	yes
Unipinnate gills	10	8	7	7	4	6	5
Viscera	brown-pink	reddish	brown-orange	orange	pink	orange	transparent
Rhinophoral lamellae	9	7	6	6	4	6	5
Rhinophoral tubercles	+	reduced	+	+	+	+	very reduced
Pallial tubercles	spherical with a broad base	cauliflower shape and pedunculate	spherical with a broad base	spherical	stout and extended	spherical	conical with rounded apex
Spiculous tubercles	+	some	+	+	+	+	+
Anus between two tubercles	+	+	+	with anal papilla	+	with anal papilla	no

DISCUSSION

The infrequent finding of *Onchidoris sparsa* is probably because of its small size, and its perfect adaptation of shape and color to the substrate of encrusting bryozoans on which it lives.

With this report of *Onchidoris sparsa,* there are now 5 species of the family Onchidorididae known from the Iberian littoral zone:

Acanthodoris pilosa (Müller, 1789)
Onchidoris neapolitana (Delle Chiaje, 1841)
Onchidoris luteocincta (M. Sars, 1870)
Onchidoris sparsa (Alder & Hancock, 1846) and
Onchidoris papillata (Portmann, 1960) (cf. Ros, 1975: 316-318; and 1976: 33-34; Ortea, 1977a). This is less than half of the 13 species of Onchidorididae known to occur along the European shoreline. There have been few studies of the occurrence of nudibranchs in Spain, so the small number of species may be simply a collection artifact.

The presence of *Onchidoris sparsa* in Asturias lends support to the notion that the distributional range of species currently known only from the English Channel may actually be much larger. Additional documentation for this idea has been supplied by the recent findings of *Limapontia senestra* (Quatrefages, 1844), *Goniodoris nodosa* (Montagu, 1808) and *Doto pinnatifida* (Montagu, 1804) along the Spanish coast (cf. Ortea, 1977a; 1977b: 86-87, and 1978: 111-113).

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